

REMARKS

The office action of December 28, 2005 has been reviewed and its contents carefully noted. Reconsideration of this case, as amended, is requested. Claims 1-26, 29-35, 38-39 and 41-47 remain in this case, claims 1, 3-8, 14 and 44 being amended by this response. No new matter has been added. The Applicant respectfully points out that the amendments were made to clarify the subject matter being claimed, and narrow two separate sections of claim 1. Therefore, the amendments should not necessitate a new search.

The numbered paragraphs below correspond to the numbered paragraphs in the Office Action.

STATEMENT OF THE SUBSTANCE OF THE INTERVIEW

The Applicant, Dr. Chad Moore, and the Applicant's agent, Meghan Van Leeuwen, had a telephone interview with the Examiner, Jennifer Doan, on February 23, 2006.

There were no exhibits shown or demonstrations exhibited during the telephonic interview.

Claims 1, 4, 46 and 47 were discussed in the interview. Goldman and Takano, prior art of record, were discussed during the interview.

The parties discussed the definition of a lens function. The Examiner stated that optical fibers have a lens function. Although the Applicant and the Applicant's agent disagreed with the Examiner's definition, they proposed removing "function" from the claim. The Examiner acknowledged that amending the claim to read "lens" would overcome Goldman.

The parties then discussed whether or not the optical fiber in Goldman was "for use in an electronic display". The Applicant and the Applicant's agent argued that the optical fibers in Goldman are used in a catheter, not for use in an electronic display. The Examiner disagreed, and commented that the optical fibers are for use in an electronic display, because the visual results from the catheter are displayed on a screen.

The Applicant and the Applicant's agent proposed removing "for use" from claim 1. The Examiner stated that she would need to consider the comments made during the interview and review the amendment further in order to make a decision regarding whether the amendment overcame Goldman. She pointed out that claim 1 would be allowable if claim 4 was incorporated into claim 1.

The parties also discussed the rejection of claim 46 over Takano. The Applicant and the Applicant's agent explained that, although there is a bundle of fibers in Takano, they do not contain wire electrodes. The Examiner agreed with the Applicant's argument, and stated that claims 46 and 47 were allowable over Takano.

The Applicant's agent thanked the Examiner and agreed to send in a response after final rejection.

Applicant believes that this statement satisfies the requirements to file a Statement of the Substance of the Interview, and accurately represents the substance of the interview conducted. If the Examiner disagrees, or believes for any other reason that direct contact with Applicant's agent would advance the prosecution of the case to finality, she is invited to telephone the undersigned at the number given below.

Rejection under 35 U.S.C. §102

3. Claims 1 and 2 were rejected under 35 U.S.C. 102(b) as being anticipated by Goldman et al. (4,928,695). Applicant respectfully disagrees with this rejection.

Goldman discloses a catheter to laser diagnose and treat abnormal electrically conducting tissue of an organ in a human body. This is very different from the invention of claim 1, which is a fiber with a lens for an electronic display.

As amended, claim 1 includes, in part "a fiber in an electronic display." The Examiner states that Goldman discloses a fiber for use in an electronic display, and points to col. 1, lines 5-10 and col. 6, line 12 to support this statement. The first passage the Examiner cites reads "This invention relates to in vivo catheters or probes, and, more particularly, to an in vivo catheter capable of detecting abnormalities in the electrical conducting bundles of the heart or other

electrical field-producing organs of the human body, and then treating the affected area with a laser.” (col. 1, lines 5-10). This passage merely states that the invention is an in vivo catheter or probe; it mentions nothing about a fiber in an electronic display.

The Applicant believes that the second passage that the Examiner is referring to is “The reflected, phase conjugated beam 45 enters the control unit 14 from the optic fiber 32 and is transmitted through a lens 46 to the entrance face of a vidicon 48 located exteriorly of the control unit 14. This image can then be displayed on a screen 50, also located exteriorly of the control unit 14, for viewing by the attending physician.” (col. 6, lines 8-14) While this passage mentions an “optical fiber”, and “displayed on a screen”, it does not disclose a fiber in an electronic display. The optical fiber in Goldman et al. is not in an electronic display. It is part of an in-vivo catheter, which obtains the beam from inside the body. That image is then transferred to a screen. The fiber in Goldman is part of the catheter; it is not in an electronic display. While Goldman does mention using a screen 50 in his apparatus, it is to display the image coming from the vidicon 48 and is located externally from the control unit 14, which is where the fibers 32 and 36 are located. The optical fibers in Goldman are not in an electronic display.

Claim 1 also includes “wherein said fiber comprises: a) at least one electrode; and b) a lens designed into at least a part of said fiber”. The Examiner points to the following passages to support her assertion that a lens function is disclosed in Goldman. “The control unit 14 is connected to a low power, illuminating laser 28 which transmits a mapping, laser beam 30 into an optic fiber 32 carried within the flexible tube 12 having a discharge end 34 at the tip 16 of the flexible tube 12. The mapping beam 30 strikes the heart 15 and at least a portion of the mapping beam 30 forms a reflected beam 37. This reflected beam 37 is transmitted through a third optic fiber 36 mounted within the flexible tube 12 between the tip 16 and the control unit 14”. (col. 5, lines 42-50) “The conjugated beam 44 is then reflected off of the heart 15 and at least a portion thereof enters the optic fiber 32 producing a reflected, phase conjugated beam 45. This reflected, phase conjugated beam 45 moves through the optic fiber 32 in the opposite direction from the initial, mapping beam 30, i.e., toward the control unit 14, and along substantially the same path as the mapping beam 30.” (col. 6, lines 1-8). Neither of these passages disclose a lens designed into at least a part of a fiber.

The Examiner states that “Goldman et al. ... specifically disclose an optic fiber (12) is focusing and reflecting the laser beam” (present office action dated December 28, 2005, page 8, lines 9-11). But, as shown in Figure 3 and discussed in the passage above, the optic fibers are conduits for the laser beam; they are not lenses. The optic fibers do not focus or reflect the laser beam. They merely transmit the laser beam to and from the organ (the heart in Figure 3). In fact, the only lens 46 mentioned in Goldman is not part or even shown to be attached to the optic fibers.

Since claim 1 includes one or more elements not disclosed in Goldman, the anticipation rejection of claim 1 is overcome. Reconsideration and withdrawal of the rejection of claim 1 is respectfully requested.

Dependent claim 2, being dependent upon and further limiting claim 1, should also be allowable for that reason, as well as for the additional recitations it contains. Reconsideration and withdrawal of the rejection of claim 2 is respectfully requested.

4. Claim 46 was rejected under 35 U.S.C. 102(b) as being anticipated by Takano et al. (4,978,195). Applicant respectfully disagrees with this rejection.

Claim 46 includes, in part, “a) at least one fiber to form structure within the display comprising a wire electrode to carry a majority of a current along a length of the fiber”. Takano does not disclose a fiber containing a wire electrode. In fact, there is no mention in the entire patent of using a wire electrode or a fiber containing a wire electrode.

The Examiner points to the following passage to support her statement that Takano et al. discloses all of the elements of the claim. “A fiber optics faceplate, comprising a multiplicity of optical fibers-laid parallel to each other, has its light-entrance side held against the screen of the electron beam means for the transmission of the optical image created thereon. An image sensor such as that comprised of charge-coupled devices, is held opposite the light-exit side of the fiber optics faceplate for translating the incoming image from optical to electric form. Also included is a transparent layer of electrically conducting material which is interposed between the fiber optics faceplate and the image sensor and which is capable of transmitting all the wavelengths of light that can travel through the fiber optics faceplate.” (col. 2, line 57 through col. 3, line 2).

This passage does not disclose a fiber including a wire electrode to carry a majority of a current along a length of a fiber.

Claim 46 also includes, in part, “(b) a transparent electrode connected to the wire electrode to spread a charge from the wire electrode across at least a portion of a surface of the fiber.” The passage above does disclose a transparent layer of electrically conducting material (col. 2, line 66), however the transparent layer of electrically conducting material is not connected to a wire electrode nor is it used to spread the charge from a wire electrode across the surface of a fiber. Takano’s transparent conductive layer serves to prevent the localized electrification of the light-exit side of the fiber optics flaceplate and of electrostatically shielding the image sensor from the electron beam means (col. 3, lines 3-7). What this means is that the transparent conductive layer is deposited on the face of the fiber optic plate (which is a bundle of optical fibers used to transmit an image from one side of the bundle to the other) to keep the face of the fiber optic plate from charging up (a 10 keV electron beam can create a lot of free charge), and to block any noise (electric field or voltage) that may be generated from the 10 keV potential. Therefore, the transparent conductive layer in Takano is used to remove any charge from a surface to keep that surface at ground potential. The transparent conductive layer is not used to spread a charge across a surface or increase the potential on that surface.

Since claim 46 includes one or more elements not disclosed in Takano, the anticipation rejection of claim 46 is overcome. Reconsideration and withdrawal of the rejection of claim 46 is respectfully requested.

Rejections under 35 U.S.C. §103

6. Claim 12 was rejected under 35 U.S.C. 103(a) as being unpatentable over Goldman. Applicant respectfully disagrees with the rejection. The argument regarding the anticipation of claim 1, upon which claim 12 depends, is repeated here by reference.

Claim 1, upon which claim 12 depends, includes, in part “a fiber in an electronic display.” Goldman does not teach or suggest a fiber in an electronic display. The optical fiber in Goldman et al. is not in an electronic display. It is part of an in-vivo catheter, which obtains the beam from inside the body. That image is then transferred to a screen. While Goldman does

mention using a screen 50 in his apparatus, it is to display the image coming from the vidicon 48 and is located externally from the control unit 14, which is where the fibers 32 and 36 are located. The optical fibers in Goldman are not in an electronic display.

Claim 1 also includes “wherein said fiber comprises: a) at least one electrode; and b) a lens designed into at least a part of said fiber”. Goldman does not teach or suggest a lens designed into at least a part of a fiber. In fact, the lens 46 is not part or even shown to be attached to the optical fiber in Goldman.

Goldman does not teach or suggest claim 1. Therefore, claim 1 is not obvious over Goldman.

Dependent claim 12, being dependent upon and further limiting claim 1, should also be allowable for that reason, as well as for the additional recitations it contains. Reconsideration and withdrawal of the rejection of claim 12 is respectfully requested.

7. Claim 13 was rejected under 35 U.S.C. 103(a) as being unpatentable over Goldman in view of Rockwell, III (5,748,825). Applicant respectfully disagrees with the rejection. The argument regarding the anticipation of claim 1, upon which claim 13 depends, is repeated here by reference.

Claim 1, upon which claim 13 depends, includes, in part “a fiber in an electronic display.” Goldman does not teach or suggest a fiber in an electronic display. The optical fiber in Goldman et al. is not in an electronic display. It is part of an in-vivo catheter, which obtains the beam from inside the body. That image is then transferred to a screen. While Goldman does mention using a screen 50 in his apparatus, it is to display the image coming from the vidicon 48 and is located externally from the control unit 14, which is where the fibers 32 and 36 are located. The optical fibers in Goldman are not in an electronic display.

Claim 1 also includes “wherein said fiber comprises: a) at least one electrode; and b) a lens designed into at least a part of said fiber”. Goldman does not teach or suggest a lens designed into at least a part of a fiber. In fact, the lens 46 is not part or even shown to be attached to the optical fiber in Goldman.

Regarding claim 1, Rockwell III does not provide what Goldman lacks. More specifically, Rockwell III does not disclose a fiber comprising a lens designed into at least a part of a fiber. Neither Goldman or Rockwell III, alone or in combination, teach or suggest claim 1. Therefore, claim 1 is not obvious over these references.

Dependent claim 13, being dependent upon and further limiting claim 1, should also be allowable for that reason, as well as for the additional recitations it contains. Reconsideration and withdrawal of the rejection of claim 13 is respectfully requested.

8. Claim 47 was rejected under 35 U.S.C. 103(a) as being unpatentable over Takano. Applicant respectfully disagrees with the rejection. The argument regarding the anticipation of claim 46, upon which claim 47 depends, is repeated here by reference.

Claim 46 includes, in part, “a) at least one fiber to form structure within the display comprising a wire electrode to carry a majority of a current along a length of the fiber”. Takano does not teach or suggest a fiber containing a wire electrode. In fact, there is no mention in the entire patent of using a wire electrode or a fiber containing a wire electrode.

The Examiner points to the following passage to support her statement that Takano et al. teaches or suggests all of the elements of the claim. “A fiber optics faceplate, comprising a multiplicity of optical fibers laid parallel to each other, has its light-entrance side held against the screen of the electron beam means for the transmission of the optical image created thereon. An image sensor such as that comprised of charge-coupled devices, is held opposite the light-exit side of the fiber optics faceplate for translating the incoming image from optical to electric form. Also included is a transparent layer of electrically conducting material which is interposed between the fiber optics faceplate and the image sensor and which is capable of transmitting all the wavelengths of light that can travel through the fiber optics faceplate.” (col. 2, line 57 through col. 3, line 2). This passage does not teach or suggest a fiber including a wire electrode to carry a majority of a current along a length of a fiber.

Claim 46 also includes, in part, “b) a transparent electrode connected to the wire electrode to spread a charge from the wire electrode across at least a portion of a surface of the fiber.” The passage above does disclose a transparent layer of electrically conducting material

(column 2, line 66), however the transparent layer of electrically conducting material is not connected to a wire electrode nor is it used to spread the charge from a wire electrode across the surface of a fiber. Takano's transparent conductive layer serves to prevent the localized electrification of the light-exit side of the fiber optics faceplate and of electrostatically shielding the image sensor from the electron beam means (col. 3, lines 3-7). What this means is that the transparent conductive layer is deposited on the face of the fiber optic plate (which is a bundle of optical fibers used to transmit an image from one side of the bundle to the other) to keep the face of the fiber optic plate from charging up (a 10 keV electron beam can create a lot of free charge), and to block any noise (electric field or voltage) that may be generated from the 10 keV potential. Therefore, the transparent conductive layer in Takano is used to remove any charge from a surface to keep that surface at ground potential. The transparent conductive layer is not used to spread a charge across a surface or increase the potential on that surface.

Since claim 46 includes one or more elements not taught or suggested in Takano, claim 46 is not obvious over Takano.

Dependent claim 47, being dependent upon and further limiting claim 46, should also be allowable for that reason, as well as for the additional recitations it contains. Reconsideration and withdrawal of the rejection of claim 47 is respectfully requested.

Allowable Subject Matter

7. Claims 3-11 and 14-19 were objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claim 1, upon which claims 3-11 and 14-19 depend, should now be allowable.

Dependent claims 3-11 and 14-19, being dependent upon claim 1, should also be allowable for that reason, as well as for the recitations they contain. Reconsideration and withdrawal of the objection of claims 3-11 and 14-19 is respectfully requested.

8. Applicant gratefully acknowledges Examiner's statement that claims 20-26, 29-35, 38-39 and 41-45 are allowable.

Conclusion

Applicant believes the claims, as amended, are patentable over the prior art, and that this case is now in condition for allowance of all claims therein. Such action is thus respectfully requested. If the Examiner disagrees, or believes for any other reason that direct contact with Applicants' attorney would advance the prosecution of the case to finality, she is invited to telephone the undersigned at the number given below.

"Recognizing that Internet communications are not secured, I hereby authorize the PTO to communicate with me concerning any subject matter of this application by electronic mail. I understand that a copy of these communications will be made of record in the application file."

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